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LUMINARY Memo #189

To: Distribution
From: D. Densmore
Date: 28 December 1970
Subject: Luminary Revision 194

The following changes were incorporated into Revision 194: PCR 347, further implementation of PCR 324, PCR 1044, and PCR 334 rev. 1.

1) PCR 347 (Modification of set configuration of AGSCODE word).

Because of coding problems in the AGS program, AGSCODE had to be changed from 57777 (high scale)/17777 (low scale) to 57776 (high scale)/17776 (low scale) in set configuration. A new constant, OCT57776, had to be defined for this change.

2) PCR 324 (PGNCS to AGS data transfer).

- a) Frequency of data transfer was more accurately controlled by not allowing AGSCODE to be set again for 50 seconds after it has been set. The time of the last setting is stored in OLDAGS. A check is made in P20 in READRDOT whether at least 50 seconds have elapsed between MKTIME and OLDAGS. If it has not, AGSCODE is not set again. If it has, AGSCODE is set, with either the low scale or high scale value, and MKTIME is stored in OLDAGS.
- b) The erasable OLDAGS was defined in E3 in two unshared erasables at the end of the bank.
- c) OLDAGS was zeroed in STARTSB2 to make sure the rendezvous radar information gets put on the downlist on the next pass after any kind of restart, hardware or software.
- d) Lunar Surface Align downlist was corrected. Its sublist #7 was equated to the Rendezvous sublist #7 and not changed when the Rendezvous sublist was changed in accord with this PCR. A new 5-word snapshot sublist (LMSAL07) was defined with the proper quantities.

- e) Nine double precision constants had to be shifted around in four fixed banks in order to make room for the implementation of item 2. d. Double precision constants 3/4, 7/12, and 9/16 were moved out of Bank 4. 3/4 and 7/12 were moved into Bank 11 and 9/16 was moved into Bank 12. This made room in Bank 4 to move in 6 double precision constants (RATESP through RATESP +11D) from Bank 5 where the room was really needed for another Lunar Surface Align sublist.

3) PCR 1044 (Redesign R53-R57).

FLT59FLG was cleared in DUMMYAD in V37 to initialize for normal inflight marking.

4) PCR 334 rev. 1 (Change DSKY Descent/Ascent Nouns).

V57 logic was changed as follows.

- a) V57E sets LRINH flag.
- b) V57 (LRON) no longer generates any display, exiting to GOPIN after setting LRINH.

V58 (LROFF) resets LRINH.

Note: A keypunch error (a BZF V63STAT instead of N63STAT) was corrected in LLGE in connection with the implementation of this PCR.

GSOP Impact

The following items should be examined for impact on the various GSOP sections:

section 2	items 1, 2, 3
section 4	items 2, 4